CONCLUSION

Applicant submits that the present application is in form for allowance, and such action is respectfully requested. The Commissioner is authorized to charge any additional fees which may be required, including petition fees and extension of time fees, or credit any overpayment to Deposit Account No 50-1865 (Docket No. 13724-845).

Respectfully submitted,

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Versions With Markings To Show Changes Made.

1. (Amended) A method of treating a tumor comprising:

providing a tissue biopsy and treatment apparatus for detecting and treating a tumor, the apparatus comprising an elongated delivery device including a lumen, the elongated delivery device being maneuverable in tissue; a sensor array deployable from the elongated [member]delivery device, the sensor array including a plurality of resilient members, at least one of the plurality of resilient members being positionable in the elongated delivery device in a compacted state and deployable with curvature into tissue from the elongated delivery device in a deployed state, at least one of the plurality of resilient members including at least one of a sensor, a tissue piercing distal end or a lumen, the sensor array having a geometric configuration adapted to volumetrically sample tissue at a tissue site to differentiate or identify tissue at the tissue site; and at least one energy delivery device coupled to one of the sensor array, at least one of the plurality of resilient members or the elongated delivery device;

introducing the apparatus into a target tissue site;

distinguishing a tissue type utilizing the sensor array;

positioning the energy delivery device utilizing tissue type information derived from the sensor array to ablate or necrose a tumor volume;

delivering energy from the energy delivery device to ablate or necrose at least a portion of the tumor volume; and

determining an amount of tumor volume ablation utilizing the sensor array.

3. (Amended) The method of claim 2, wherein the apparatus includes logic resources coupled to at least one of the sensor, the energy delivery device or a power source coupled to the energy delivery device, the method further comprising:

adjusting one of a power, a current, a power duty cycle or a fluid flow response to an input from the sensor array.

27. (Amended) The method of claim 25, further comprising:

positioning the energy delivery device within [the] a tissue volume defined by the healthy tissue margin;

delivering energy from the energy delivery device to ablate or necrose tissue in the tissue volume defined by the health tissue margin.

36. (Amended) The method of claim [36] 35, further comprising:

comparing an input from the sensor array to the database.

37. (Amended) The method of claim 32, wherein the tissue type is one of a cancer, a metastatic cancer, a cyst, a tumor, a coagulated tissue, an injured tissue, a lysed tissue or a necrosed tissue.

45. (Amended) The method of claim [32] 39, wherein the tissue property includes at least one of a physiologic property, a metabolic property, a thermal property, a temperature, an electrical property, an impedance, an optical property, an absorbance, a reflectance, a dimensional property or a pH.

47. (Amended) The method of claim 1, further comprising:

obtaining a baseline tissue property measurement of the target tissue site utilizing the sensor array.

48. (Amended) The method of claim 47, further comprising:

comparing the baseline property measurement to a second tissue property measurement made during or after the delivery of energy to the target tissue site.

51. (Amended) The method of claim 49, further comprising:

adjusting the energy delivery parameter to compensate for one of hysteresis, thermal hysteresis, electrical hysteresis, tissue desiccation, cell lysis or protein denaturization.

55. (Amended) The method of claim 54[49], wherein the logic resources are electronically coupled to a power source coupled to the energy delivery device.

56. (Amended) The method of claim 54[49], wherein the logic resources include at least one of a processor, a microprocessor, a software module, a fuzzy logic module, a database, a histological database, a tissue database or a tumor database.

57. (Amended) The method of claim 1, further comprising:

[deploying]delivering a marking agent to the target tissue site; and

marking at least one of a tumor volume, a tumor surface, an ablated tissue volume, a hyperthermic tissue volume, or an injured tissue volume.

65. (Amended) The method of claim 57, wherein the marking agent is configured to enhance [the]an amount of thermal injury to a least a portion of the tumor volume, the method further comprising:

enhancing [the] an amount of thermal injury to at least a portion of the tumor volume.

67. (Amended) The method of claim 57, wherein the sensor array is configured to detect [a]the marking agent.

70. (Amended) The method of claim 57, wherein the [plurality of] marking agent[s] includes a first marking agent coupled to a marking agent carrier, wherein the marking agent carrier is configured to release the first agent marking at a selectable temperature, the method further comprising:

releasing the first marking agent in the target tissue site at a selectable temperature.

78. (Amended) The method of claim 1, wherein the geometric configuration is substantially one of a hemisphere, a sphere, an oval, a cone, a pyramidal, a polyhedron or a tetrahedron.

87. (Amended) The method of claim 1, wherein the sensor array is

configured to detect at least one of a tissue ablation volume, a tissue thermal volume or a tissue hyperthermic volume.

99. (Amended) The method of claim 92, wherein the emitter is configured to emit electromagnetic energy over a selectable frequency range.

101. (Amended) A method of treating a tumor comprising:

providing a tissue biopsy and treatment apparatus for detecting and treating a tumor, the apparatus comprising an elongated delivery device including a lumen, the elongated delivery device being maneuverable in tissue; a sensor array deployable from the elongated [member]delivery device, the sensor array including a plurality of resilient members, at least one of the plurality of resilient members being positionable in the elongated delivery device in a compacted state and deployable with curvature into tissue from the elongated delivery device in a deployed state, at least one of the plurality of resilient members including at least one of a sensor, a tissue piercing distal end or a lumen, the sensor array having a geometric configuration adapted to volumetrically sample tissue at a tissue site to differentiate or identify tissue at the tissue site; and at least one energy delivery device coupled to one of the sensor array, at least one of the plurality of resilient members or the elongated delivery device;

introducing the apparatus into a target site;

maneuvering the energy delivery device through tissue responsive to information derived from the sensor array to ablate or necrose a tumor volume;

delivering energy from the energy delivery device to ablate or necrose at least a portion of the tumor volume; and

determining an amount of tumor volume ablation utilizing the sensor array.

102. (Amended) A method of treating a tumor comprising:

providing a tissue biopsy and treatment apparatus for detecting and treating a tumor, the apparatus having a sensor array positionable at a target tissue site, the sensor array including at least a first and a second resilient member, at least one of the first or second resilient members including at least one of a [a] sensor, a lumen, a sensor member positionable in the lumen, an energy delivery or a tissue piercing distal end;

introducing the apparatus into the target tissue site;

positioning the sensor array at the target tissue site;

utilizing the sensor array to make a first measurement of a tissue parameter at the target site [or retrieving a tissue parameter for the target site from a database of tissue parameters];

delivery energy to the target tissue site;

utilizing the sensor array to make a second measurement of the tissue parameter during or after an energy delivery interval;

comparing one of the first measurement or [the retrieved] a stored parameter to the second measurement; and

determining an amount of injury or ablation of the target tissue volume utilizing a comparison between one of the first measurement or the [retrieved] parameter to the second measurement.

104. (Amended) A method of treating a tumor comprising:

providing a tissue biopsy and treatment apparatus for detecting and treating a tumor, the apparatus comprising an [elongated] delivery device means including a lumen means, the [elongated]delivery device means being maneuverable in tissue; a sensor array means deployable from the [elongated member]delivery device, the sensor array means [including a plurality of resilient members, at least one of the plurality of resilient members] being positionable in the [elongated]delivery device means in a compacted state and deployable with curvature into tissue from the [elongated] delivery device means in a deployed state, [at least one of the plurality of resilient members including at least one of a sensor], at least a portion of the sensor array means including a tissue piercing distal end means or a lumen means, the sensor array means having a geometric configuration adapted to volumetrically sample tissue at a tissue site to differentiate or identify tissue at the tissue site; and at least one energy delivery device means coupled to one of the sensor array means, [at least one of the plurality of resilient members] or the [elongated] delivery device means;

distinguishing a tissue type utilizing the sensor array means;

positioning the energy delivery device means utilizing tissue type information derived from the sensor array means to ablate or necrose a tumor volume;

delivering energy from the energy delivery device means to ablate or necrose at least a

portion of the tumor volume; and

determining an amount of tumor volume ablation utilizing the sensor array means.